

Work Order ID 113164

February-12-14 8:47:01 AM

113164

Page 1

Item ID: D3631-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Washer

100

Start Date: 2/10/14 **Start Qty:** 30.00

Required Date: 2/10/14 **Req'd Qty:** 30.00

30

30

Cust Item ID:

Stop

NS2

Reference:

Approvals: **Process Plan:** M-5

Date: 14-02-14

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

**Sequence ID/
Work Center ID**

**Operation
Description**

**Set Up/
Run Hours**

Tool ID

Tool #

**Plan
Code**

**Accept
Qty**

**Reject
Qty**

**Reject
Number**

**Insp.
Stamp**

Draw Nbr	Revision Nbr
D3631	Rev A

100

0.00

100

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 23667 Purchase Part Number: 95606A170 Supplier: Mc
Master Carr Certificate of conformity is required

CL 14/02/14 100

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.00

Packaging

Ensure certificate of conformity is attached

14/2/14 (100)

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Quality Control

Memo

0.00

DAS
27
9.59
14/2/14

100

DQA:

Date:



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
				Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
				Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
				Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function				<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence			
								<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>			
								<input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other			

Work Order ID 113164

February-12-14 8:47:01 AM

113164

Page 2

Item ID: D3631-1 **Accept** ***N900040100*** **Setup** **Start** ***NS1***

Revision ID:

Item Name: Washer

Stop ***NS2***

Start Date: 2/10/14 **Start Qty:** 30.00 ***30***

Cust Item ID:

Required Date: 2/10/14 **Req'd Qty:** 30.00 ***30***

Customer:

Reference:

Approvals:	Process Plan: _____	Date: _____	Tooling: _____	Date: _____	Run	Start	*NR1*
	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Packaging	Identify as per dwg & Stock Location: Memo FP001	0.00			DAS 32 9-89	64/2/24			300
140 *140* QC	QC21- Final Inspection - Work Order Release Memo	0.00							PL 14-02-24
Quality Control									JH 14-02-24

140 QC21- Final Inspection - Work Order Release 0.00

140

QC

Quality Control

JH 14-02-24

DQA:

Date:



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS							
				Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering Quality Other					
				Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>						
				Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>						
				Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>						
Root Cause	Date	Step	Qty	Description of work order update or non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector		
Design													
Doc/Data													
Equip/Tooling													
Handling/Pre													
Material													
Operator													
Offset/Setup													
Process													
Supplier													
Training													
Transport													
Unapproved													
FAULT CATEGORY													
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function		<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence						<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>	
												<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	

Picklist Print

Page 1

February-12-14 8:47:07 AM

Work Order ID: 113164

113164
D3631-1

Parent Item: D3631-1

Parent Item Name: Washer

Start Date: 2/10/14

Required Date: 2/10/14

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP Rev:A New Issue 07-07-28 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
95606A170		Purchased		No		110	Each	0.0000	1	30	**	<i>2/4/14</i>	<i>(100)</i>

95606A170

Washer

DQA:

Date:



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS							
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

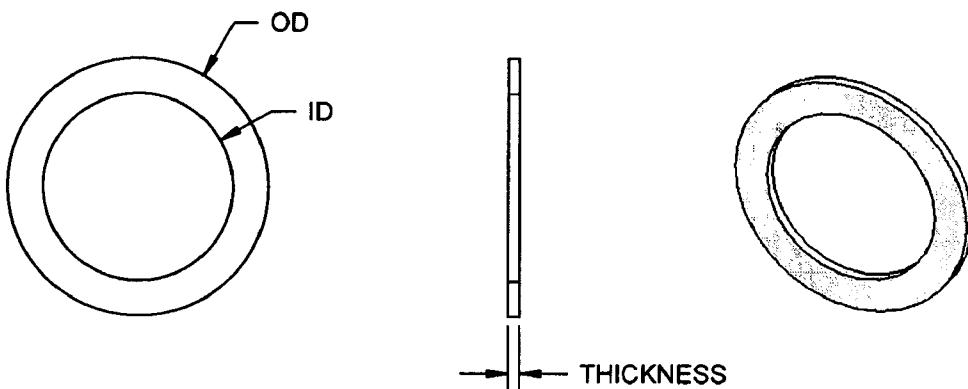
FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

DART

DESIGN <i>CB</i>	DRAWN BY <i>CB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>PH</i>	APPROVED <i>#</i>	DRAWING NO. D3631	REV. A	SHEET 1 OF 1
DATE 07.05.16		TITLE WASHER	SCALE	NTS
REV A	DATE 07.05.16	DESCRIPTION NEW ISSUE		

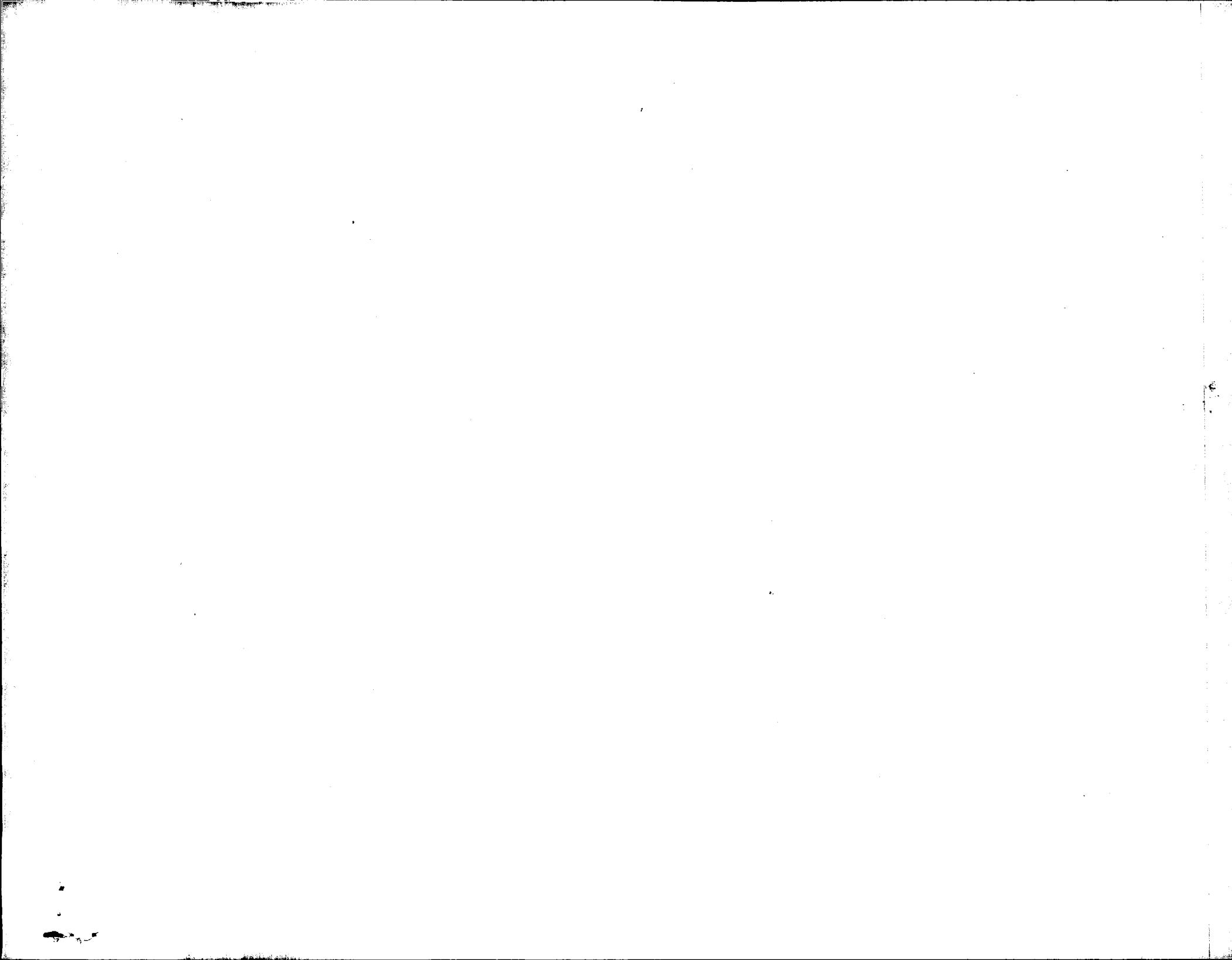
SPECIFICATION CONTROL DRAWING

1135164 MUL
14-02-14**D3631-X WASHER****RELEASED**
07.08.02 *#*

PART NUMBER	OD	ID	THICKNESS	MATERIAL	SUPPLIER
D3631-1	0.688	0.500	0.031	NYLON	McMASTER-CARR P/N: 95606A170

NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED





Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO23067

Purchase Order Date 2/19/2014
PO Print Date 2/19/2014

Page Number 2 of 5

Order From : VU-MCM001 Ship To : DART AEROSPACE LTD
MCMASTER-CARR SUPPLY CO, 1270 ABERDEEN
P.O. BOX 7690 HAWKESBURY, ON K6A 1K7
CHICAGO, IL 60680-7690 CANADA
US

Contact Name		Buyer	Chantal Lavoie		
Vendor Phone	330 995 5500	Customer POID			
Ship To Contact		Customer Tax #	10127-2607		
Ship To Phone		Terms	Net 10		
Ship Via	FedEx PI collect	Currency	USD		
Ship Acct		FOB	FCA - (Free Carrier)		
3 97787A661	Expandable Pin	2/20/2014 Yes 3/20/2014	30.00 Each <i>Nec 2</i>	\$114.68	\$3,440.40
AS PER DWG D4711 REV. C B113418				Line Total:	\$3,440.40
4 92311A599	SET SCREW	2/20/2014 Yes 3/20/2014	200.00 Each	\$0.22	\$43.20
AS PER DWG D2712 REV. B B113205				Line Total:	\$43.20
95606A170	Washer	2/20/2014 Yes 3/20/2014	100.00 Each	\$0.10	\$10.14
AS PER DWG D3631 REV. A B113164				Line Total:	\$10.14

PO Instructions: Procurement Quality Clauses
A005 right of entry
A026 certification of material conformance
A040 notification of quality escape

Note:

McMASTER-CARR.

Purchase Order
PO23067

Page 1 of 2

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Order Placed By
Chantal Lavoie
McMaster-Carr Number
8113645-02

02/19/2014

Line	Description	Ordered	Shipped
1	91249A146 Black-Oxide Finish Pan Head Phillips Machine Screw, 18-8 Stainless Steel, 6-32 Thread, 3/8" Length, Packs of 100 Your Part Number: B113458	1 Pack	1
	Unit Price: \$5.40 Extended Price: \$5.40		
2	91525A120 Type 316 Stainless Steel Large-Diameter Flat Washer, 1/4" Screw Size, 1" OD, .04"-.06" Thick, Packs of 25 Your Part Number: B113216	4 Packs	4
	Unit Price: \$6.66 Extended Price: \$26.64		
3	97787A661 Expanding Diameter Quick-Release Pin, 1/4" Diameter, 1" Usable Length Your Part Number: B113418	30 Each	25
	Unit Price: \$114.68 Extended Price: \$2,867.00		
4	92311A599 18-8 Stainless Steel Cup Point Set Screw, 5/16"-24 Thread, 5/8" Long, Packs of 50 Your Part Number: B113205	4 Packs	4
	Unit Price: \$10.80 Extended Price: \$43.20		
5	95606A170 Nylon 6/6 General Purpose Flat Washer, Off-White, 7/16" Screw Size, .69" OD, .02"-.04" Thickness, Packs of 100 Your Part Number: B113164	1 Pack	1
	Unit Price: \$10.14 Extended Price: \$10.14		
6	98606A010 Alloy Steel Cup Point Set Screw Assortment, 200 Pieces, 12 Sizes in a Compartmented Plastic Box Your Part Number: 71500-30	2 Each	2
	Unit Price: \$44.29 Extended Price: \$88.58		
7	97395A452 Corrosion Resistant Dowel Pin, Type 316 Stainless Steel, 1/8" Diameter, 1" Length, Packs of 10 Your Part Number: 71500-30	1 Pack	1
	Unit Price: \$9.79 Extended Price: \$9.79		
8	5644K14 Assemble-Your-Own Retracting Air Hose, 5/16" ID, 3/8" OD, 210 PSI, Red, 100' Length Your Part Number: 71500-15	1 Each	1
	Unit Price: \$74.74 Extended Price: \$74.74		
9	5644K54 Brass Male 360 Degree Easy-Install Body for 5/16" ID, Assemble-Your-Own Retracting Air Hose Your Part Number: 71500-45	20 Each	20
	Unit Price: \$7.80 Extended Price: \$156.00		